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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,575	05/10/2002	Michel Bremont	RAG-14302/08	4825

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GIFFORD, KRASS, GROH, SPRINKLE & CITKOWSKI, P.C
PO BOX 7021
TROY, MI 48007-7021

EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/088,575	BREMONT ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-21* is/are allowed.

6)☒ Claim(s) *7-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The substitute specification filed 10-22-04 has been approved for entry by the examiner.

2) Claim 13 is objected to because of the following informalities:

On line 15, --,-- should be inserted after "outer tube".

Appropriate correction is required.

3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5) Claims 7-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 7-13, the scope and meaning of "a solid ring of hot melt adhesive insertable [in contrast to "inserted"] into the annular gap and positioned against said connecting wall" (emphasis added). One of ordinary skill in the art is not reasonably appraised of the scope of protection afforded by this language. The description of the solid ring being "positioned' against the wall requires the solid ring to be within the annular gap whereas the description of the ring being "insertable" within the annular gap fails to require the solid ring to be within the annular gap. In other words, it is unclear if the use of the word "insertable" is (a) merely intended to be a short hand way of

describing the *process* of used to obtain a solid ring "positioned" against the connecting wall or (b) requiring / removing some other limitation. Compare the use of the word "insertable" at claim 7 line 4 with the use of the word "insertable" at claim 7 line 11.

In claim 11, the description of "longer than said outer tube by about one-half" (emphasis added) is ambiguous. One half of what?

6) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8) **Claims 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakashiba et al.**

Nakashiba et al discloses an electrofusion joint ("tubular coupling element"), for joining tubular members such as pipes 15, 16 for supplying water comprising:

an "outer tube";

a "connecting wall";

an "inner tube" (support) 23; and

a solid ring 13 of non-crosslinked polyolefin arranged in an "annular gap" between the "outer tube" and the "inner tube". See figure 4.

Two enlarged partial copies of Figure 4 of Nakashiba et al is reproduced below:

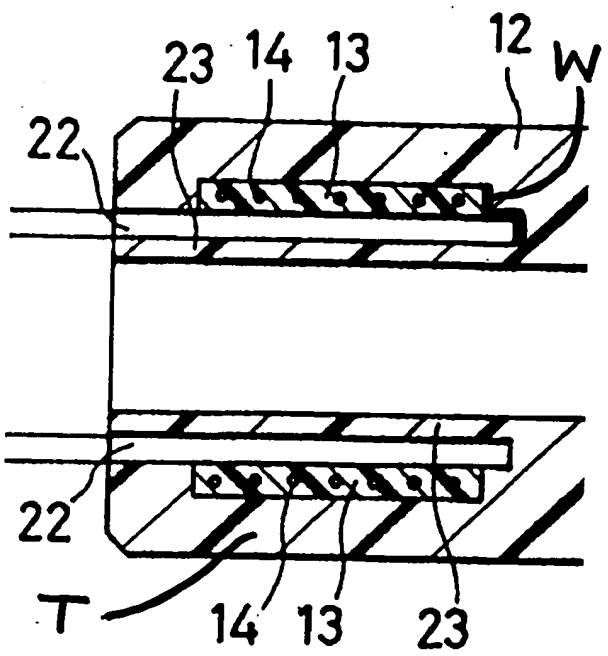

Figure A

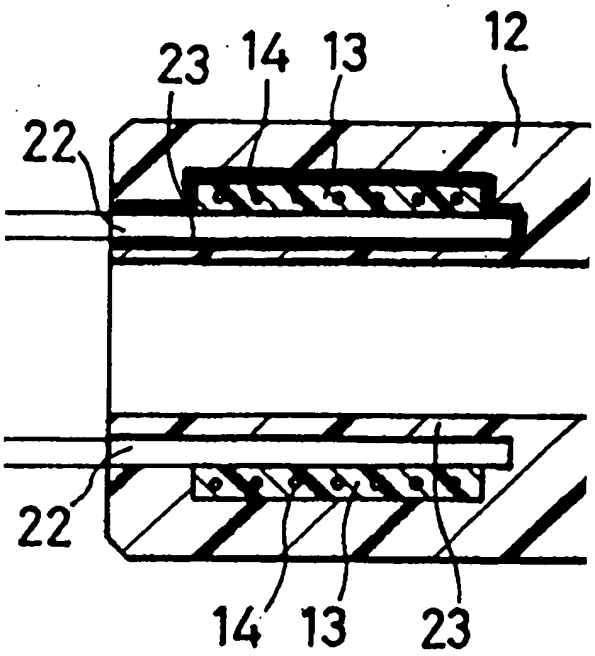

Figure B

In figure A, the reference letters W and T in the above figure A were added by the examiner. The reference letter T indicates the "outer tube". The reference latter W indicates the "connecting wall". The surface of the "connecting wall" W has been darkened by the examiner in the above enlargement of figure 4 to facilitate discussion of figure 4. In figure B, the darkened lines (bold face lines) indicate the inner surface of the "annular gap".

With respect to the "connecting wall", the surface of the connecting wall W interconnects the rear end of the "outer tube" T and the rear end of the "inner tube" 23.

The claimed connecting wall reads on this "connecting wall" of Nakashiba et al. It is acknowledged that the surface of "connecting wall" in figure 4 of Nakashiba et al comprises two vertical sections connected together by a horizontal section. However, the claimed connecting wall reads on a connecting wall having, in cross section along the axis of the tubes, a non-linear (stepped) surface facing the annular gap. In other words, the claimed tubular coupling element fails to require a connecting wall defining a *flat* surface, which extends *linearly* from an inner cylindrical surface of the outer tube to an outer cylindrical surface of the inner tube. Claims 7-13 fail to specify the *shape* of the rear end of the outer tube, the *shape* of the rear end of the inner tube and the *shape* of the connecting wall.

Furthermore, "a solid ring of hot melt adhesive insertable into the annular gap and positioned against said connecting wall" (emphasis added) defines *the location of the solid ring* in the tubular coupling element, but fails to require a *process step* of making the tubular coupling element by *inserting* the solid ring in a preexisting annular gap. See MPEP 2113. The claimed solid ring reads on Nakashiba et al's solid ring 13, which (1) is in an *inserted* position within the annular gap defined by "the outer tube", "connecting wall" and "inner tube" and (2) is *positioned* against the surface W of the "connecting wall". With respect to "hot-melt", the claimed solid ring of hot-melt adhesive reads on the solid ring of noncrosslinked polyolefin since when the "electrofusion joint" ("tubular coupling element) is used, it melts and fuses to the tubular member. See col. 6 lines 41-42.

As to claim 8, the size of the ring 13 in relation to the size of the "annular gap".

9) **Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashiba et al in view of Harget et al (WO 98/53241).**

Nakashiba et al is considered to anticipate claims 7-8. In any event: As to claim 7, it would have been obvious to one of ordinary skill in the art to use a solid ring of *hot melt* adhesive for the solid ring of thermoplastic material in the figure 4 coupling element since Harget et al, also directed to a heat fusion fitting, teaches that a second material of a solid ring to be melted and fused to a pipe may be *hot melt* adhesive (see page 14).

As to claim 8, the limitation of the solid ring filling approximately one-half the annular gap would have been obvious in view of (a) the relative sizes of the illustrated solid ring 13 and "annular gap" in figure 4 and (b) Nakashiba et al's teaching to melt and fuse the solid ring so as to join pipes together.

10) **Claims 9-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashiba et al in view of Harget et al (WO 98/53241) as applied above and further in view of Europe '831 (EP 289831) and optionally Great Britain '496 (GB 2133496).**

As to claims 9-10 and 12-13, it would have been obvious to one of ordinary skill in the art to provide the tubular surface of the inner and / or outer tube of Nakashiba et al's figure 4 coupling element with longitudinal ribs separated by longitudinal grooves in view of (1) Europe '831's suggestion to provide a tubular surface of a tube of tubular coupling element with longitudinal ribs (separated by longitudinal grooves) to ensure centering of a pipe end in the coupling element and to ensure a constant adhesive thickness and optionally (2) Great Britain '496's teaching to provide the tubular surface

of an inner tube and / or outer tube of a coupling element with grooves to control glue line thickness (page 2 lines 7-9, 25-26).

11) **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashiba et al in view of Harget et al (WO 98/53241) as applied above and further in view of German '299 (DE 2603299) and optionally Stephenson (US 1921642).**

As to claim 11, it would have been obvious to one of ordinary skill to provide the "inner tube" of Nakashiba et al's figure 4 coupling element such that it is longer than the outer tube as claimed since (1) German '299 suggests using a longer "inner tube" than "outer tube" for a coupling element, which like that of Nakashiba et al defines an annular gap for receiving a free pipe end and optionally (2) Stephenson suggests using a "inner tube" longer than "outer tube" by "about one-half" for a coupling element, which like that of Nakashiba et al defines an annular gap for receiving a free pipe end . The limitation of the length of the outer tube being approximately equal to an outside diameter of the fluid line would have been obvious and could have been determined without undue experimentation in view of Nakashiba et al's teaching to secure the pipe end in the annular space defined by the "outer tube" and "inner tube" of the coupling element.

Allowable Subject Matter

12) **Claims 14-21 are allowed.**

The prior art of record fails to suggest the step of "pressing the solid ring of [hot-melt] adhesive in the annular gap against the connecting wall, wherein the solid ring of

adhesive fills about one-half the annular gap" in combination with the remaining limitations of the claimed method.

Remarks

13) The prior art rejection using Gadsen et al against claims 7-13 has been withdrawn since Gadsen et al fails to disclose, teach or suggest "a connecting wall interconnecting said inner tube rear end and said outer tube rear end, wherein said outer tube, said connecting wall and said inner tube define an annular gap; and a solid ring of hot melt adhesive insertable [inserted] into the annular gap and positioned against said connecting wall". It is noted that fusible barrier insert 29 is not positioned against a connecting wall. It is also noted that since hot melt adhesive 2 lines the entire length of the tube 26, Gadsen et al's tubular coupling element fails to have "a connecting wall interconnecting said inner tube rear end and said outer tube rear end, wherein said outer tube, said connecting wall and said inner tube define an annular gap" *and* "a solid ring of hot melt adhesive insertable [inserted] into the annular gap and positioned against said connecting wall".

As to Nakashiba et al, applicant's arguments filed 10-22-04 have been fully considered but they are not persuasive.

Applicant argues that the adhesive ring in Nakashiba et al is not "insertable". In response, the examiner makes the following comments: First: Note the 112 second paragraph rejection regarding "insertable". Second: The term "insertable" fails to require *structure* different from that shown in figure 4 of Nakashiba et al; applicant having provided no convincing argument to the contrary. It is noted that "insertable"

does not exclude (a) the claimed product (the claimed tubular coupling element) having been formed by expanding the outer tube, inserting the ring and then recovering the tube, (b) an injection molding technique or (c) a laminating technique.

Applicant argues that Nakashiba et al does not disclose a connecting wall secured to the rear end of an inner tube and a rear end of the concentric outer tube that defines an annular gap. Examiner disagrees since Nakashiba et al's figure 4 embodiment comprises a connecting wall connected to rear ends as claimed. See above discussion regarding figures A and B. It is emphasized that the neither the *shape* of the rear ends nor the *shape* of the connecting wall is specified in claims 7-13.

Applicant argues that Nakashiba et al's bonding layer (ring 13) is adjacent a groove instead of in an annular gap (page 14 of response filed 10-22-04). This argument is not commensurate in scope with the claims and is therefore not persuasive since claims 7-13 fails to specify the *shape* of the annular gap.

Applicant argues that Nakashiba et al does not disclose a bonding insert that is a ring of hot melt adhesive, but does not explain why hot melt adhesive defines over Nakashiba et al's ring of non-crosslinked polyethylene material which bonds to the pipes. In any event: Note the application of Harget, which provides ample suggestion to use hot melt adhesive in Nakashiba et al's heating element (i.e. ring 13).

Applicant argues that Nakashiba et al teaches away from the invention since Nakashiba et al teaches a laminate structure that extends along the length of the tube. This argument is not commensurate in scope with the claims and is therefore not persuasive since none of the of the claims exclude a "laminate structure".

With respect to applicant's arguments regarding non-removable heating element, claims 7-13 fails to exclude a heating element within the ring of hot melt adhesive.

14) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
March 4, 2005

Steven D. Maki 3-4-05
STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733